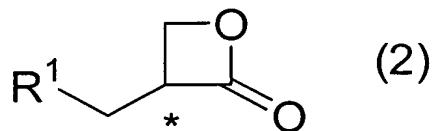


AMENDMENTS TO THE CLAIMS

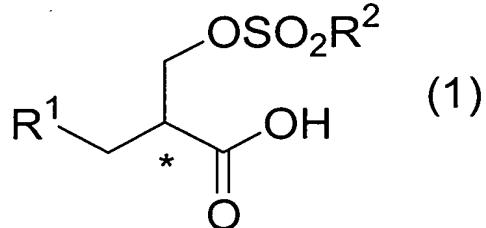
This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A process for producing an optically active β -lactone derivative represented by formula (2):



(wherein * represents an asymmetric carbon atom, and R¹ represents a phenyl group which may be substituted), the process comprising cyclizing an optically active 2-sulfonyloxymethyl-3-phenylpropionic acid derivative represented by formula (1):



(wherein * and R¹ represent the same as the above, and R² represents a C₁-C₁₀ alkyl group which may be substituted or a C₆-C₂₀ aryl group which may be substituted).

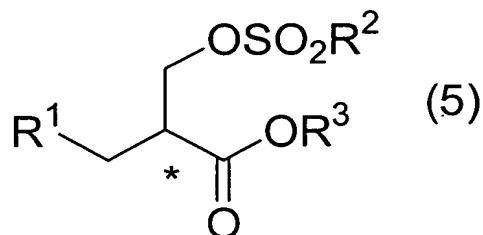
2. (original): The process according to claim 1, wherein cyclization reaction is performed in a mixed solvent containing water and an organic solvent.

3. (original): The process according to claim 2, wherein at least one selected from the group consisting of toluene, benzene, xylene, anisole, ethyl acetate, diethyl ether, methylene chloride, chloroform, and carbon tetrachloride is used as the organic solvent.

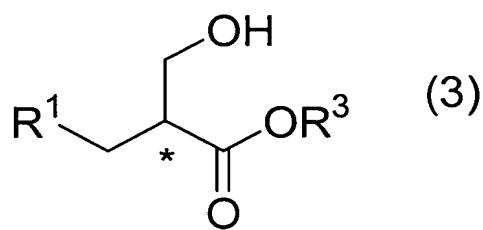
4. (currently amended): The process according to ~~any one of claims 1 to 3~~ claim 1, wherein the cyclization reaction is performed at a pH of 4 or higher.

5. (currently amended): The process according to ~~any one of claims 1 to 3~~ claim 1, wherein the cyclization reaction is performed in a pH range of 4 to 12.

6. (currently amended): The process according to ~~any one of claims 1 to 5~~ claim 1, wherein the optically active 2-sulfonyloxymethyl-3-phenylpropionic acid derivative represented by formula (1) is obtained by hydrolyzing an optically active 2-sulfonyloxymethyl-3-phenylpropionic acid ester derivative represented by formula (5):



(wherein *, R¹, and R² represent the same as the above, and R³ represents a C₁-C₁₀ alkyl group which may be substituted or a C₆-C₂₀ aryl group which may be substituted by a C₆-C₂₀ group), the derivative represented by formula (5) being produced by reacting an optically active 2-hydroxymethyl-3-phenylpropionic acid ester derivative represented by formula (3):



(wherein *, R¹, and R³ represent the same as the above) with a sulfonic acid halide represented by formula (4):



(wherein R² represents the same as the above, and X represents a halogen atom).

7. (original): The process according to claim 6, wherein hydrolysis is performed with at least one acid selected from the group consisting of acetic acid, formic acid, hydrochloric acid, sulfuric acid, p-toluenesulfonic acid, methanesulfonic acid, and trifluoromethane sulfonic acid.

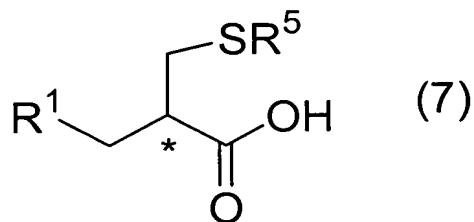
8. (original): The process according to claim 6, wherein hydrolysis is performed with sulfuric acid or p-toluenesulfonic acid and acetic acid.

9. (currently amended): The process according to ~~any one of claims 6 to 8~~ claim 6, wherein hydrolysis is performed at a temperature in a range of 50°C to a reflux temperature.

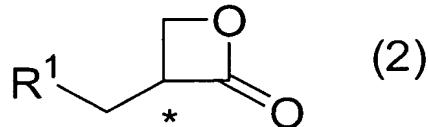
10. (currently amended): The process according to ~~any one of claims 6 to 9~~ claim 6, wherein R² is methyl, p-tolyl, phenyl, benzyl, or trifluoromethyl.

11. (currently amended): The process according to ~~any one of claims 6 to 10~~ claim 6, wherein R³ is methyl, ethyl, or tert-butyl.

12. (currently amended): A process for producing an optically active 2-thiomethyl-3-phenylpropionic acid derivative represented by formula (7):



(wherein * represents an asymmetric carbon atom, R¹ represents a phenyl group which may be substituted, and R⁵ represents a C₁-C₁₀ alkyl group which may be substituted, a C₆-C₂₀ aryl group which may be substituted, a C₂-C₂₀ acyl group which may be substituted, or a C₇-C₂₀ aroyl group which may be substituted), the process comprising reacting an optically active β-lactone derivative represented by formula (2):



(wherein * and R¹ represent the same as the above) with a sulfur compound represented by formula (7)(6):



(wherein R⁴ represents a hydrogen atom or an alkali metal atom, and R⁵ represents the same as the above).

13. (currently amended): The process according to claim 12, wherein the optically active β-lactone derivative represented by formula (2) is produced by the process according to ~~any one of claims 1 to 14~~ claim 1.

14. (currently amended): The process according to claim 12-~~or 13~~, wherein R⁴ is a hydrogen atom or a potassium atom.

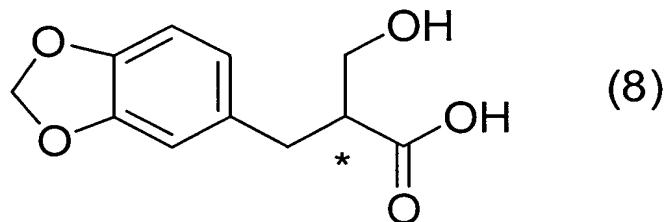
15. (currently amended): The process according to ~~any one of claims 12 to 14~~ claim 12, wherein R⁵ is acetyl.

16. (currently amended): The process according to ~~any one of claims 1 to 15~~ claim 1 or 12, wherein R¹ is any one selected from the group consisting of phenyl, 2,3-methylenedioxyphenyl, 2,3-ethylenedioxyphenyl, 2,3-propylenedioxyphenyl, 3,4-methylenedioxyphenyl, 3,4-ethylenedioxyphenyl, 3,4-propylenedioxyphenyl, o-tolyl, m-tolyl, p-tolyl, 2,3-xylyl, 2,4-xylyl, 2,5-xylyl, 2,6-xylyl, 3,4-xylyl, o-phenoxyphenyl, m-phenoxyphenyl, p-phenoxyphenyl, o-phenylphenyl, m-phenylphenyl, p-phenylphenyl, o-chlorophenyl, m-chlorophenyl, p-chlorophenyl, o-bromophenyl, m-bromophenyl, p-bromophenyl, o-fluorophenyl, m-fluorophenyl, p-fluorophenyl, o-nitrophenyl, m-nitrophenyl, p-nitrophenyl, o-cyanophenyl, m-cyanophenyl, p-cyanophenyl, o-hydroxyphenyl, m-hydroxyphenyl, p-hydroxyphenyl, o-

methoxyphenyl, m-methoxyphenyl, p-methoxyphenyl, 2,3-dimethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 3,4-dimethoxyphenyl, 2,3-difluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 3,4-difluorophenyl, 2,3-dihydroxyphenyl, 2,4-dihydroxyphenyl, 2,5-dihydroxyphenyl, 2,6-dihydroxyphenyl, and 3,4-dihydroxyphenyl.

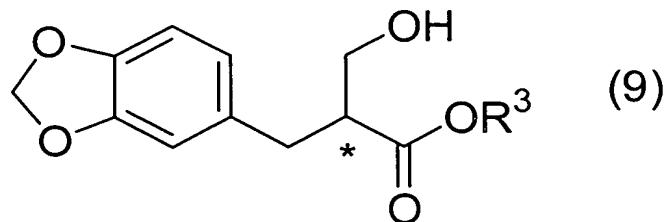
17. (currently amended): The process according to ~~any one of claims 1 to 16~~ claim 1 or 12, wherein R¹ is phenyl or 3,4-methylenedioxyphenyl.

18. (currently amended): The process according to ~~claims~~claim 12, wherein the optically active β -lactone derivative represented by formula (2) is produced by cyclizing an optically active 2-hydroxymethyl-3-(3,4-methylenedioxyphenyl)propionic acid derivative represented by formula (8):



(wherein * represents an asymmetric carbon atom).

19. (currently amended): The process according to ~~claims~~claim 18, wherein the optically active 2-hydroxymethyl-3-(3,4-methylenedioxyphenyl)propionic acid derivative represented by formula (8) is produced by hydrolyzing an optically active 2-hydroxymethyl-3-(3,4-methylenedioxyphenyl)propionic acid ester derivative represented by formula (9):



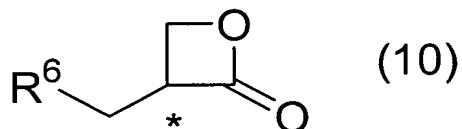
(wherein * represents an asymmetric carbon atom, and R³ represents a C₁-C₁₀ alkyl group which may be substituted, or a C₆-C₂₀ aryl group which may be substituted).

20. (original): The process according to claim 19, wherein R³ is methyl, ethyl, or tert-butyl.

21. (currently amended): The process according to ~~any one of claims 1 to 20~~ claim 1 or 12, wherein the asymmetric carbon atom has an S absolute configuration.

22. (currently amended): The process according to ~~any one of claims 1 to 20~~ claim 1 or 12, wherein the asymmetric carbon atom has an R absolute configuration.

23. (original): An optically active β-lactone derivative represented by formula (10):



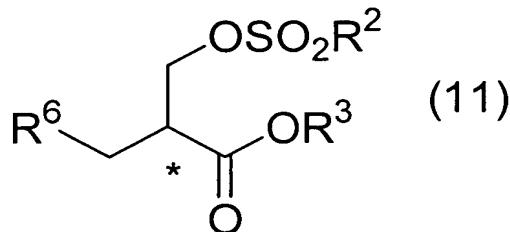
(wherein * represents an asymmetric carbon atom, and R⁶ represents a substituted phenyl group).

24. (original): The compound according to claim 23, wherein R⁶ is any one selected from the group consisting of 2,3-methylenedioxyphenyl, 2,3-ethylenedioxyphenyl, 2,3-propylenedioxyphenyl, 3,4-methylenedioxyphenyl, 3,4-ethylenedioxyphenyl, 3,4-propylenedioxyphenyl, o-tolyl, m-tolyl, p-tolyl, 2,3-xylyl, 2,4-xylyl, 2,5-xylyl, 2,6-xylyl, 3,4-xylyl, o-phenoxyphenyl, m-phenoxyphenyl, p-phenoxyphenyl, o-phenylphenyl, m-phenylphenyl, p-phenylphenyl, o-chlorophenyl, m-chlorophenyl, p-chlorophenyl, o-bromophenyl m-bromophenyl, p-bromophenyl, o-fluorophenyl, m-fluorophenyl, p-fluorophenyl, o-nitrophenyl, m-nitrophenyl, p-nitrophenyl, o-cyanophenyl, m-cyanophenyl, p-cyanophenyl, o-hydroxyphenyl, m-hydroxyphenyl, p-hydroxyphenyl, o-methoxyphenyl, m-methoxyphenyl, p-methoxyphenyl, 2,3-dimethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 3,4-dimethoxyphenyl, 2,3-difluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-

difluorophenyl, 3,4-difluorophenyl, 2,3-dihydroxyphenyl, 2,4-dihydroxyphenyl, 2,5-dihydroxyphenyl, 2,6-dihydroxyphenyl, and 3,4-dihydroxyphenyl.

25. (original): The compound according to claim 23, wherein R⁶ is 3,4-methylenedioxyphenyl.

26. (original): An optically active 2-sulfonyloxymethyl-3-phenylpropionic acid ester derivative represented by formula (11):



(wherein * represents an asymmetric carbon atom, R⁶ represents a substituted phenyl group, R² represents a C₁-C₁₀ alkyl group which may be substituted or a C₆-C₂₀ aryl group which may be substituted, and R³ represents a C₁-C₁₀ alkyl group which may be substituted or a C₆-C₂₀ aryl group which may be substituted).

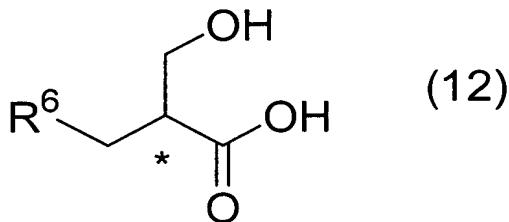
27. (original): The compound according to claim 26, wherein R² is methyl, p-tolyl, phenyl, benzyl, or trifluoromethyl.

28. (currently amended): The compound according to claim 26-~~or 27~~ claim 26, wherein R³ is methyl, ethyl, or tert-butyl.

29. (currently amended): The compound according to ~~any one of claims 26 to 28~~ claim 26, wherein R⁶ is any one selected from the group consisting of 3,4-methylenedioxyphenyl, 3,4-ethylenedioxyphenyl, 3,4-propylenedioxyphenyl, o-tolyl, m-tolyl, p-tolyl, 2,3-xylyl, 2,4-xylyl, 2,5-xylyl, 2,6-xylyl, 3,4-xylyl, o-chlorophenyl, m-chlorophenyl, p-chlorophenyl, o-bromophenyl, m-bromophenyl, p-bromophenyl, o-fluorophenyl, m-fluorophenyl, p-fluorophenyl, o-nitrophenyl, m-nitrophenyl, p-nitrophenyl, o-cyanophenyl, m-cyanophenyl, p-cyanophenyl, o-

hydroxyphenyl, m-hydroxyphenyl, p-hydroxyphenyl, o-methoxyphenyl, m-methoxyphenyl, p-methoxyphenyl, 2,3-dimethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, and 3,4-dimethoxyphenyl.

30. (original): An optically active 2-hydroxymethyl-3-phenylpropionic acid derivative represented by formula (12):



(wherein * represents an asymmetric carbon atom, and R^6 represents a substituted phenyl group).

31. (original): The compound according to claim 30, wherein R^6 is any one selected from the group consisting of 2,3-methylenedioxyphenyl, 2,3-ethylenedioxyphenyl, 2,3-propylenedioxyphenyl, 3,4-methylenedioxyphenyl, 3,4-ethylenedioxyphenyl, 3,4-propylenedioxyphenyl, 2,3-xylyl, 2,4-xylyl, 2,5-xylyl, 2,6-xylyl, 3,4-xylyl, o-chlorophenyl, m-chlorophenyl, p-chlorophenyl, o-bromophenyl, m-bromophenyl, p-bromophenyl, o-fluorophenyl, m-fluorophenyl, p-fluorophenyl, o-nitrophenyl, m-nitrophenyl, p-nitrophenyl, o-cyanophenyl, m-cyanophenyl, p-cyanophenyl, o-hydroxyphenyl, m-hydroxyphenyl, p-hydroxyphenyl, o-methoxyphenyl, m-methoxyphenyl, p-methoxyphenyl, 2,3-dimethoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, and 3,4-dimethoxyphenyl.

32. (currently amended): The compound according to ~~any one of claims 23 to 31~~ claim 23, 26 or 30, wherein the asymmetric carbon atom has an S absolute configuration.

33. (currently amended): The compound according to ~~any one of claims 23 to 31~~ claim 23, 26 or 30, wherein the asymmetric carbon atom has an R absolute configuration.